

CLAIMS

We claim:

1. A pressure intensifier assembly comprising:
 - (i) a high-pressure barrel assembly;
 - 5 (ii) pressurising pressurizing means;
 - (iii) a first and a second end closure assembly;
 - (iv) a tension frame assembly adapted to resist axial load exerted, in use, along the longitudinal axis of the high-pressure barrel assembly;wherein the intensifier assembly further comprises at least one clamping piston adapted to
10 preload the end closure(s) and the high-pressure barrel assembly against the tension frame assembly in order to overbalance anticipated internal end loads.
2. A pressure intensifier assembly as claimed in Claim 1, wherein the tension frame assembly takes the form of a yoke.
3. A pressure intensifier assembly as claimed in Claim 1, wherein in the assembly
15 further comprises a first and a second high pressure seal assembly, said seal assemblies being located at either end of the high-pressure barrel assembly.
4. A pressure intensifier assembly as claimed in Claim 1, wherein said pressurizing means comprises a hydraulic ram assembly.
5. A pressure intensifier assembly as claimed in Claim 1, wherein the assembly further
20 comprises a stand.
6. A pressure intensifier assembly as claimed in Claim 1, wherein the high-pressure barrel assembly is detachably mountable from the intensifier assembly.
7. A pressure intensifier assembly as claimed in Claim 6, wherein the high-pressure barrel assembly is detachable from the intensifier assembly without the need to undo a screw
25 thread.
8. A pressure intensifier assembly as claimed in Claim 1, wherein at least one end closure is retractable and, once retracted, the assembly is adapted such that the pressure barrel assembly becomes detachable from the intensifier assembly.
9. A pressure intensifier assembly as claimed in Claim 1, wherein said assembly
30 further comprises a high-pressure barrel assembly lifting means.
10. A pressure intensifier assembly as claimed in Claim 5, wherein the high-pressure barrel assembly is pivotally mounted with respect to the stand.

11. A pressure intensifier assembly comprising:

- (i) a high-pressure barrel assembly;
- (ii) at least one end closure assembly;

5 wherein the intensifier assembly further comprises at least one clamping piston adapted to preload the end closure(s) and the high-pressure barrel assembly in order to overbalance anticipated internal end loads.

12. A pressure intensifier assembly as claimed in Claim 11, further comprising a tension frame assembly adapted to resist axial load exerted, in use, along the longitudinal axis of the high pressure barrel assembly.

10 13. A pressure intensifier assembly as claimed in Claim 12, wherein the clamping piston acts against the tension frame assembly.

14. A pressure intensifier assembly as claimed in Claim 12, wherein the tension frame assembly takes the form of a yoke.

15 15. A pressure intensifier assembly as claimed in Claim 11, wherein the assembly further comprises a first and a second high pressure seal assembly, said seal assemblies being located at either end of the high-pressure barrel assembly.

16. A pressure intensifier assembly as claimed in Claim 11, further comprising a pressurizing means.

20 17. A pressure intensifier assembly as claimed in Claim 16, wherein said pressurizing means comprises a hydraulic ram assembly.

18. A pressure intensifier assembly as claimed in Claim 11, wherein the assembly further comprises a stand.

19. A pressure intensifier assembly as claimed in Claim 11, wherein the high-pressure barrel assembly is detachably mountable from the intensifier assembly.

25 20. A pressure intensifier assembly as claimed in Claim 19, wherein the high-pressure barrel assembly is detachable from the intensifier assembly without the need to undo a screw thread.

30 21. A pressure intensifier assembly as claimed in Claim 19, wherein at least one end closure is retractable and, once retracted, the assembly is adapted such that the pressure barrel assembly becomes detachable from the intensifier assembly.

22. A pressure intensifier assembly as claimed in Claim 11, wherein said assembly further comprises a high-pressure barrel assembly lifting means.

23. A pressure intensifier assembly as claimed in Claim 18, wherein the high-pressure barrel assembly is pivotally mounted with respect to the stand.